

R315. Environmental Quality, Solid and Hazardous Waste.

R315-316. Infectious Waste Requirements.

R315-316-1. Applicability.

(1) The standards of Rule R315-316 apply to:

(a) any health facility as defined by Subsection 19-6-102(10) that generates more than 200 pounds, per month, of infectious waste as defined by Subsection 19-6-102(12);

(b) any transporter that collects and transports more than 200 pounds of infectious waste in any one load; and

(c) a storage, treatment, or disposal facility.

(2) The standards of Rule R315-316 do not apply to a health facility that generates 200 pounds, or less, of infectious waste per month.

~~[(3) All material that has been rendered non infectious may be handled as non infectious waste, provided it is not an otherwise regulated hazardous or radioactive waste and is not subject to the requirements of Rule R315-316.~~

~~-(a) Except for incineration and steam sterilization, no treatment method may be used to render materials non infectious without receiving approval from the Executive Secretary.~~

~~-(b) Prior to its use, the Executive Secretary shall make a determination, on a site specific basis, that the proposed treatment method renders materials non infectious.~~

~~-(c) The determination shall be based on the results of laboratory tests, submitted by the person proposing the use of the treatment method, meeting the following requirements:~~

~~----- (i) the laboratory tests shall be conducted:~~

~~----- (A) by qualified laboratory personnel;~~

~~----- (B) using recognized microbial techniques;~~

~~----- (C) on samples that have been inoculated with the test organisms, then subjected to the proposed treatment method and processed the same way as will be used in the treatment process if approved; and~~

~~----- (ii) the results of the tests must document that the proposed treatment method inactivates:~~

~~----- (A) vegetative bacteria Staphylococcus aureus (ATCC 6538) or Pseudomonas aeruginosa (ATCC 15442) at a 6 Log₁₀ reduction or greater (a 99.9999% reduction or greater of the organism population);~~

~~----- (B) fungi Candida albicans (ATCC 18804), Penicillium chrysogenum (ATCC 24791), or Aspergillus niger at a 6 Log₁₀ reduction or greater;~~

~~----- (C) viruses Polio 2, Polio 3, or MS 2 Bacteriophage (ATCC15597 B1) at a 6 Log₁₀ reduction or greater;~~

~~----- (D) parasites Cryptosporidium spp. oocysts or Giardia spp. cysts at a 6 Log₁₀ reduction or greater;~~

~~----- (E) mycobacteria Mycobacterium terrae, Mycobacterium phlei, or Mycobacterium bovis (BCG) (ATCC 35743) at a 6 Log₁₀ reduction or greater; and~~

~~----- (B) Bacterial spores Bacillus stearothermophilus spores (ATCC 7953) or Bacillus subtilis spores (ATCC 19659) at a 4 Log₁₀ reduction or greater (a 99.99% reduction or greater of the organism population).~~

~~----- (iii) The Executive Secretary shall review the submitted materials and reply in writing within 30 days of the receipt of the submittal.]~~

Section moved to section 5 of the rule to make it easier to find

R315-316-3. Storage and Containment Requirements.

(1) Containment shall be in a manner and location which affords protection from animal intrusion, does not provide a breeding place or a food

source for insects and rodents, and minimizes exposure to the public.

(2) Unless all waste is considered infectious and labeled as such, infectious waste shall be segregated by separate containment from other waste ~~[at the point of origin]~~ during storage.

(3) Except for sharps, infectious waste shall be contained in plastic bags or inside rigid containers. The bags shall be securely tied and the containers shall be securely sealed to prevent leakage or expulsion of solid or liquid wastes during storage, handling, or transport.

(4) Sharps shall be contained for storage, transportation, treatment, and disposal in leak-proof, rigid, puncture-resistant containers which are taped closed or tightly lidded to preclude loss of contents.

(5) All containers used for containment of any infectious waste shall be red or orange, or if containers are not red or orange, shall be clearly identified with the international biohazard sign and one of the following labels: "INFECTIOUS WASTE", "BIOMEDICAL WASTE", or "BIOHAZARD".

(6) If other waste is placed in the same container as ~~[regulated]~~ infectious waste, then the generator must package, label, and mark the container and its entire contents as infectious waste.

(7) A rigid infectious waste container may be reused for infectious or non-infectious waste if it is thoroughly washed and decontaminated each time it is emptied or if the surfaces of the container have been completely protected from contamination by disposable, unpunctured, or undamaged liners, bags, or other devices that are removed with the infectious waste, and the surface of the liner has not been damaged or punctured.

(8) Storage and containment areas must protect infectious waste from the elements, be ventilated to the outside, be only accessible to authorized persons, and be marked with prominent warning signs on, or adjacent to, the exterior doors or gates. The warning signs shall contain the international biohazard sign and shall state: "CAUTION -- INFECTIOUS WASTE STORAGE AREA -- UNAUTHORIZED PERSONS KEEP OUT" and must be easily read during daylight from a distance of 25 feet.

(9) If infectious waste is stored longer than seven days, it shall be stored at 40 degrees Fahrenheit (5 degrees Celsius), or below, but must be treated or disposed within 30 days.

(10) Compactors, grinders, or similar devices shall not be used to reduce the volume of infectious waste before the waste has been rendered non-infectious unless the device is contained sufficiently to prevent contamination of the surrounding area.

R315-316-5. Infectious Waste Treatment and Disposal Requirements.

(1) Infectious waste shall be treated or disposed as soon as possible but not to exceed 30 days after generation, and shall be treated or disposed at a facility with a permit or other form of approval allowing the facility to treat or dispose infectious waste.

(2)(a) All material that has been rendered non-infectious may be handled as non-infectious waste, provided it is not otherwise a hazardous waste or radioactive waste excluded from disposal in a solid waste facility by Rule R315-316. All material that has been rendered non-infectious may be handled as non-infectious waste, provided it is not otherwise a hazardous waste or radioactive waste excluded from disposal in a solid waste facility by Rule R315-316.

(b) Except for incineration and steam sterilization, no treatment method may be used to render materials non-infectious without receiving prior approval from the Executive Secretary.

Change makes it claeear that treatment of infectious waste must have Executive Secretary approval.

~~[(2)]~~ (3) Infectious waste may be incinerated in an incinerator.

(a) The incinerator shall comply with the requirements of Rule R315-306 and provide complete combustion of the waste to carbonized or mineralized ash.

(b) A composite sample of the ash and residues from the incinerator shall be taken at least once each year. The sample shall be analyzed by the U.S. EPA Test Method 1311 as provided in 40 CFR Part 261, Appendix II, 1991 ed., Toxic Characteristics Leaching Procedure (TCLP) on parameters determined by the Executive Secretary to determine if it is a hazardous waste. If hazardous, it shall be managed by applicable state regulations.

~~[(3)]~~ (4) Infectious waste may be sterilized by heating in a steam sterilizer to render the waste non-infectious.

(a) The operator shall have available and shall certify in writing that he understands written operating procedures for each steam sterilizer, including time, temperature, pressure, type of waste, type of container, closure on container, pattern of loading, water content, and maximum load quantity.

(b) Infectious waste shall be subjected to sufficient temperature, pressure and time to inactivate *Bacillus stearothermophilus* spores in the center of the waste load at a 6 Log₁₀ reduction or greater.

(c) Unless a steam sterilizer is equipped to continuously monitor and record temperature and pressure during the entire length of each sterilization cycle, each package of infectious waste to be sterilized shall have a temperature sensitive tape or equivalent test material, such as chemical indicators, attached that will indicate if the sterilization temperature and pressure have been reached. Waste shall not be considered sterilized if the tape or equivalent indicator fails to indicate that a temperature of at least 250 degrees Fahrenheit (121 degrees Celsius) was reached during the process.

(d) Each sterilization unit shall be evaluated for effectiveness with spores of *B. stearothermophilus* at least once each 40 hours of operation or each week, whichever is less.

(e) A written log for each load shall be maintained for each sterilization unit which shall contain at a minimum:

(i) the time of day, date, and operator's name;

(ii) the amount and type of infectious waste placed in the sterilizer;
and

(iii) the temperature and duration of treatment.

(5)(a) Alternative treatment methods may be approved on a site-specific basis when the Executive Secretary finds the proposed alternative treatment method renders the material non-infectious.

(b) The determination shall be based on the results of laboratory tests, submitted by the person proposing the use of the treatment method, meeting the following requirements:

(i) the laboratory tests shall be conducted:

(A) by qualified laboratory personnel;

(B) using recognized microbial techniques;

(C) on samples that have been inoculated with the test organisms, then subjected to the proposed treatment method and processed the same way as will be used in the treatment process if approved; and

(ii) the results of the tests must document that the proposed treatment method inactivates:

(A) vegetative bacteria - Staphylococcus aureus (ATCC 6538) or Pseudomonas aeruginosa (ATCC 15442) at a 6 Log₁₀ reduction or greater (a 99.9999% reduction or greater of the organism population);

(B) fungi - Candida albicans (ATCC 18804), Penicillium chrysogenum (ATCC 24791), or Aspergillus niger at a 6 Log₁₀ reduction or greater;

(C) viruses - Polio 2, Polio 3, or MS-2 Bacteriophage (ATCC15597-B1) at a 6 Log₁₀ reduction or greater;

(D) parasites - Cryptosporidium spp. oocysts or Giardia spp. cysts at a 6 Log₁₀ reduction or greater;

(E) mycobacteria - Mycobacterium terrae, Mycobacterium phlei, or Mycobacterium bovis (BCG) (ATCC 35743) at a 6 Log₁₀ reduction or greater; and

(B) Bacterial spores - Bacillus stearothermophilus spores (ATCC 7953) or Bacillus subtilis spores (ATCC 19659) at a 4 Log₁₀ reduction or greater (a 99.99% reduction or greater of the organism population).

(iii) The Executive Secretary shall review the submitted materials and reply in writing within 30 days of the receipt of the submittal.

~~[(4)]~~ (6) Infectious waste may be discharged to a sewage treatment system that provides secondary treatment of waste but only if the waste is liquid or semi-solid and if approved by the operator of the sewage treatment system.

~~[(5)]~~ (7) Infectious waste may be disposed in a permitted Class I, II, or V Landfill. Upon entering the landfill, the transporter of infectious waste shall notify the landfill operator that the load contains infectious waste. The landfill operator shall abide by the following procedures in the disposition and covering of infectious waste:

(a) place the infectious waste containers at the bottom of the working face with sufficient care to avoid breaking them;

(b) completely cover the infectious waste immediately with a minimum of 12 inches of earth or waste material containing no infectious waste; and

(c) not compact the infectious waste until completely covered with 12 inches of earth or waste material containing no infectious waste.

The changes in the rule are to make it more readable and to make it easier to find rules on treatment.

KEY: solid waste management, waste disposal

[October 15, 2003]2006

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